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117

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,775	12/20/2005	Anatoli Verentchikov	LEC01 P-432	1394

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EXAMINER
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MASKELL, MICHAEL P

ART UNIT	PAPER NUMBER
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2881

MAIL DATE	DELIVERY MODE
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10/09/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/561,775

Applicant(s)

VERENTCHIKOV ET AL.

Examiner

Michael Maskell

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-62 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date. _____   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1 and dependents, drawn to a particular form of a multiple reflecting time of flight mass spectrometer (MR-TOF MS).

Group II, claim(s) 33 and dependents, drawn to a tandem time of flight mass spectrometer.

Group III, claim(s) 48 and dependents, drawn to a tandem MR-TOF MS.

Group IV, claim(s) 61 and dependents, drawn to a "tandem" MR-TOF MS, wherein "tandem" is a rhetorical term as there is not actually a second MS present.

2. The inventions listed as Groups I-IV do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

- a. Group I is directed towards a particular form of a MR-TOF MS. The individual components (i.e. ion source, ion mirror, drift space) are generically named and do not individually distinguish over the prior art. Therefore, although components such as the ion source are recited as common material in other groups, such components individually do not define the inventor's contribution

over the prior art. Group I cannot therefore be said to share any components with groups II-IV that distinguish over the prior art.

b. Group II is directed towards a mass spectrometer system that includes a pulsed ion source, a generically listed MR-TOF MS, a fragmentation chamber, and a mass spectrometer (no type specified). None of these elements are present in group I (the ion source of group I is not pulsed). The MR-TOF MS is present in groups III and IV, but since no specific form of MR-TOF MS is claimed in these groups, and the applicant's specification (page 1, state of the art) demonstrates that other MR-TOF MS designs are present in the prior art, this element does not distinguish over prior art. The fragmentation cell is present in groups III and IV, but kinds of fragmentation cells are known as per applicant's specification page 9; therefore this limitation does not distinguish over the prior art. The generic mass spectrometer is not present in any other groups.

c. Group III is directed towards a mass spectrometer system that includes a MR-TOF MS, a fragmentation cell, and another MR-TOF MS. As discussed above, a MR-TOF MS in general does not distinguish over the prior art, nor does a fragmentation cell. There are therefore no elements group III could share with any other group that independently distinguish over the prior art.

d. Group IV is directed towards a mass spectrometer system that includes a MR-TOF MS and a fragmentation cell, wherein the ions are cycled back to the same MR-TOF MS. As discussed above, neither a MR-TOF MS in general, nor a fragmentation cell distinguish over the prior art independently, and the

configuration to recycle the ions back to the first MR-TOF MS is not present in any other group.

3. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Maskell whose telephone number is 571/270-3210. The examiner can normally be reached on Monday-Friday 8AM-5PM EST.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571/272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2881

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Michael Maskell  
18 September 2007



ROBERT KIM  
SUPERVISORY PATENT EXAMINER